Technology in Society 66 (2021) 101640

Contents lists available at ScienceDirect

Technology in Society

journal homepage: www.elsevier.com/locate/techsoc

Digital workplace transformation in the financial service sector: Investigating the relationship between employees' expectations and intentions☆

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ARTICLE INFO

Keywords:
Digital workplace
Digital transformation
Financial service sector
Employees
Performance
Well-being

ABSTRACT

Digital workplace transformation goes beyond the adoption or non-adoption of technologies – it has far deeper effects in the context of re-designing a workplace. Future digital work implies not only a change of tools used in work activities, but it also often changes the very nature of the working activities and processes. Psychological needs of employees are important in this context: the need for autonomy, competence, and relatedness which affect the employees' motivation to accept the future workplace. More specifically, if employees have expectations that digital environment will enable them to accomplish better performance, bigger satisfaction and personal well-being more easily, they will be more motivated to support digital transformation. Thus, in our study we aim to investigate whether employee involvement, well-being and support to digital work foster digital transformation of the workplace. In doing so, we close the existing gap in literature and confirm that interpersonal relatedness in digital work environment has a significant influence on employees' performance and well-being. This, in turn, increases employees' intentions to support digital workplace transformation. We believe this study will help pre-digital organizations to rethink their strategies according to employee involvement to respond to the challenges of digital transformation. The study also encourages scholars to investigate whether and how those factors are shaped differently due to COVID-19 pandemic context.

1. Introduction

Recently, due to the process of rapid digital transformation, the nature of work has significantly changed. Today's work environment has become predominantly digital [1] employees are increasingly required to familiarize themselves with digital tools and use them in the workplace [2]. They need to apply modern digital technology and use it to perform various tasks at work [3,4].

Digital workplace simultaneously requires and enhances different employees' capabilities such as the ability to learn continuously, to quickly respond to unforeseen events or to solve novel problem collaboratively [5]. Moreover, digital working environment includes the interplay of people and machines which will perform larger parts of work in the future and thus challenge employees to be creative and innovative in providing new added values [6].

Digital work is more than offering new technology [7]. As [8] emphasizes, the success in digital working environment is not positioned in the efficiency of technology, but in the process and adaptability of the people who use it. It is necessary that the employees in the organization learn how to use technology in order to enhance productivity and performance [9]. Therefore, digital literacy becomes one of the most required and esteemed skills that carries along a number of advantages not only for the employees but for the organization as well.

Namely, workplace digital transformation goes beyond digital tools and employee digital skills. It changes the very nature of working activities and processes, and implies a redesign of working environment and culture. Therefore, a move toward a digital workplace includes a shift in organizational and work culture [10,11]. Organizations are

☆ This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.
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https://doi.org/10.1016/j.techsoc.2021.101640
Received 19 February 2021; Received in revised form 27 April 2021; Accepted 9 June 2021
Available online 30 June 2021

increasingly shifting to culture focusing on digital innovations and deep employee participation [12]. This implies that digital transformation of a workplace starts not only with a shift in the mindset of a leadership and organization but also at the employee level.

In addition to their adoption of digital tools, the employees' intention to continue using the digital workplace becomes a critical spot in the transformation. Positive expectancy and perception of employees of their future working environment become crucial. Transformation journey does not only imply the enhancement of employees' productivity and performance due to the use of digital technologies, but should also contribute to their personal well-being.

In this context, literature indicates that it is important that employees' psychological needs, such as autonomy, competences and relatedness, are fulfilled. This is in line with self-determination theory (SDT) which suggest that employees' psychological needs influence their performance and well-being expectations in digital working environment including their positive attitudes and intentions to support digital transformation [13,14].

However, so far there hasn't been much current research that addresses employees' expectations and intentions towards digital transformation of the workplace. There are only limited findings dealing with how to motivate and prepare employees to accept digital work environment. To close this existing gap in knowledge, this paper aims to address the following question: *In what measure can expectations and psychological needs of employees contribute to a more successful digital transformation of a working environment in pre-digital organizations?*

We thus strive to understand whether employee involvement, well-being and support to digital work foster digital transformation of the workplace. In doing so, we close the existing gap and confirm that interpersonal relatedness in digital work environment has a significant influence on employees' performance and well-being. This, in turn, employees' intentions to support digital workplace transformation become increased.

In this context, we join the debate on the micro-level perspective of digital transformation and contribute to the existing literature by focusing on employees' expectations, behavioral intentions and psychological needs, also including the effects they have on digital transformation of the workplace.

Hence, we believe this study will help pre-digital organizations to rethink their strategies in the context of employees' involvement in the response to the challenges of digital transformation. Empirically speaking, the study addresses 161 employees in financial institutions in Bosnia and Herzegovina. We focus on digital workplace transformation in the financial sector given digital transformation in this sector in B&H is happening first and fast. One of the most common explanations for the pronounced digitalization of the financial sector is that financial sector in B&H is mostly foreign-owned, so unlike other sectors, there is a significant and accelerated transfer of knowledge and technology from abroad. Our results show that employees' social connectedness in a working environment positively influences the employees' intentions to support digital workplace transformation.

The remainder of the paper is organized as follows. The next two sections include theoretical background and hypotheses development. Then, research methods are described. Following that, data analysis and results are examined. Finally, two last sections offer discussion of main findings, limitations and concluding remarks.

2. Theoretical background

Organizations increasingly transform their traditional workplaces into digital workplaces [10,15]. In this way they support their digital business strategies [16]. Literature stresses the importance of digital workplace and digital workforce for an organization's future success [10,17] and suggests that organizations, especially pre-digital organizations, engage in their workplace transformation. In this sense, pre-digital organizations are companies which belong to traditional industries such as retail and financial services "that were successful in the pre-digital economy, but to which the digital economy poses an existential threat" [18,19]. In order to sustain their businesses, these companies need to change and transform their processes by adopting digital technologies [20].

These changes also include workplace changes which are generally seen as leveraging technologies for improving working environment and employees' experience and performance [21]. So, the development of a future working environment is not only about digital technology and tools – it is about expectations and individual perceptions of employees regarding the challenges of digital transformation.

It is also important to emphasize that employees' attitudes and perceptions regarding new technologies do not imply the classic question of adoption, but their expectances towards a future working environment. Namely, a future workplace will include the use of technologies in everyday enterprise-working life [22], which will eventually result in a more substantial exchange of information and knowledge among employees. Unhindered information flow and better transparency in the exchange of knowledge significantly contribute to better performances as well as efficiency and productivity in the realization of tasks and projects.

Digital working environment provides better flexibility to employees in view of the use of digital resources regardless of place and time [10, 23]. Thus [7], it is found that employees can gain flexibility and productivity benefits by using digital infrastructure. In their empirical analysis of three case studies they confirmed that organizations could facilitate digital work through the appreciation and self-esteem of each employee, by giving them responsibilities and decision-making power and thereby encouraging their creativity and innovativeness.

Therefore, the focus of future workplace lies in the accomplishment of results and the efficient fulfillment of working tasks, and not in formalities such as the place and time of their realizations.

Also, digital workplace eliminates silo thinking and pushes cross-functional collaboration. The use of digital tools and platforms helps employee communication and team work, so that the re-design of the workplace does not imply only an adequate designing of virtual but also physical office space. Transformation journey requires open space that enables the exchange of information and cooperation among departments. This also contributes to a better creativity and innovativeness of employees. Thus, productivity/efficiency and creativity become main drivers for the future workplace culture [24].

However, positive effects of digital working environment, such as creativity [25] and well-being and employee performance [26–28] can be reduced by technostress. Literature suggests that technostress is mainly related to users' perception of technological complexity or even their abilities and values [29,30].

On the one hand, technostress also occurs when technology is used without the adequate change of working environment and redesign of a workplace [16]. This is why it is important that digital transformation is followed by digital leadership and a change in an organizational culture. Digital leadership and work culture should guide employees towards a new way of working. Thus [11], confirmed that in a digital environment, organizations face challenges to leadership and culture. Implementation of digital work requires an open and collaborative leadership with a clear vision and commitment instead of command and control management style [31]. On the other hand, organizations shift their culture to the culture fostering collaboration and digital innovation [12]. They use digital tools to provide employees with diverse action potentials for collaboration [32].

Therefore, digital transformation of a workplace goes beyond the adoption or non-adoption of technologies in a workplace – it has far deeper effects in the context of re-designing a workplace. Future digital workplace implies not only a change of tools used in work activities, but it also often changes the very nature of those working activities and processes.

Existing findings confirm that digital transformation provides many

advantages for organizations such as reduced operational costs, enhanced innovation, improved customer experience, increased productivity and revenue, but also for employees' productivity, experience, performances and personal well-being [33–38].

This is very important for the motivation and intentions of employees to support the workplace re-design. Their support is of great significance for a successful transformation. Active participation of employees will make the very process of the workplace re-design easier, and it will result in better outcomes because the re-designing will create a workplace in line with the expectations and needs of employees.

Psychological needs of employees are important in this context: the need for autonomy, competence, and relatedness [13,39] which affect the employees' motivation to accept the future workplace. This is in line with self-determination theory as a macro theory of human motivation which suggests that "employees' performance and well-being are affected by the type of motivation they have for their job activities" [13].

Thus [14], suggests that those universal psychological needs affect employees' perceptions and expectations towards work design and outcomes. Hence "enabling a workforce to feel competent, autonomous and connected with others" becomes key in accomplishing employees' positive attitude towards digital transformation [14].

A large number of studies have reported on beneficial effects of remote working on employee autonomy [40,41]. However, a considerable number of studies have supported detrimental impacts of work outside a traditional office environment on relational aspects of work and employee well-being. Specifically, people who work remotely work longer hours and more intensely so they are more productive, but also they feel more isolated and exhausted. Hence in comparison to the traditional working environment, characteristics such as employee autonomy, relatedness and well-being become more significant in context of remote work and they should fit the new way of working to achieve better performance and well-being [42].

Moreover, these characteristics may be shaped differently due to pandemic context. COVID-19 lockdown has forced people to work remotely and characteristics such as employee social connectedness and well-being got different meanings. Social gatherings are not allowed, so most communications and collaborations among co-workers are mediated by digital tools and it has been shown that employees enjoy higher levels of autonomy.

However, employee autonomy might potentially be distracted by employees' family issues and make them unable to concentrate on their work at home [43]. Therefore, it is necessary to examine whether and how those characteristics affect employee performance and well-being as well as their intentions to support digital workplace in this extraordinary "new normal" context.

Apart from its focus on the relationship between employees' psychological needs, their performance and well-being expectations in the context of digital working environment, another highlight of our research is digital workplace transformation in the financial service sector in one small transition economy. We focus on this research context due to several reasons. Firstly, digital transformation in financial sector in B&H is happening first and fast. One of the most common explanations for the pronounced digitalization of the financial sector is that financial service companies in B&H are mostly foreign-owned, so unlike other sectors, there is a significant and accelerated transfer of knowledge and technology from abroad. Also, in comparison to other service sectors, the financial service industry is highly standardized and strictly regulated. On the one hand, financial service companies need to manage digital transformation in a highly regulated environment while on the other hand they need to meet demands from stakeholders for greater transparency and trust [44]. To meet those demands, financial service companies invest in innovative online banking, digital platforms, exploring different channels, insurance applications, etc.

Recently, "firms in the financial services industry have been faced with the dramatic and relatively recent emergence of new technology innovations, and process disruptions" [45]. Thus, jobs in the financial sector have experienced a significant change in processes and activities in terms of the need for greater employee innovativeness and autonomy, especially in the context of creating and offering customized financial products, tailored to personal needs and preferences of clients. Considering that jobs have become service-focused and cognitively demanding, a large number of employees work as knowledge workers. Digital working environment increases employees' productivity to the extent of increasing stress, overload, exhaustion and burnout. This is the case even in "industries which traditionally had far greater decision latitude – such as finance, science, education and health" [46]. Hence, employees' psychological needs, performance and well-being expectations become crucial in digital workplace transformation in pre-digital organizations in traditional industries such as financial service sector. Those relationships are hypothesized in the following section.

3. Hypotheses development

Autonomy in literature is positively connected to employees' performance. The possibility that employees make independent decisions in certain situations and that they have the autonomy in resolving working tasks enhances their productivity, innovativeness but also enjoyment [7]. Thus [47] found that autonomy was negatively related to work exhaustion but positively related to work commitment. So, when managers empower and support employees' autonomy, they are more motivated and creative in their work [48,49]. Accordingly, management practices which promote autonomy and freedom on the job lead to higher organizational and individual performances [50]. Hence, it is proposed:

H1a. Autonomy positively influences performance expectations in the digital workplace.

Moreover [51], confirms that satisfaction of employees' psychological needs at the workplace leads to their enjoyment. Similarly [52,53], demonstrate that satisfaction of the autonomy and other basic psychological needs of the organization's employees has a positive influence on work-related well-being. Specifically [53], a large-scale study on Flemish employees confirmed that frustration of their basic psychological needs including autonomy predicted poorer well-being. Consequently, autonomy leads to employees' satisfaction and well-being [54]. It is therefore posited:

H1b. Autonomy positively influences well-being expectations in the digital workplace.

Furthermore, employees' performance and well-being also depend on interpersonal relatedness. Relatedness of employees entails collaboration which contributes to the exchange of ideas, information and knowledge – which eventually results in improved performances and employees' innovativeness [55,56]. When barriers are broken, employees perform their tasks more effectively and efficiently, and make the business more agile and competitive [57]. So, connectedness in digital workplace leads to an increased level of an individual's performance. Therefore, it is hypothesized:

H2a. Relatedness positively influences performance expectations in the digital workplace.

On the other hand, better relatedness with others positively affects the well-being and satisfaction of employees. It is often that employees have a bigger satisfaction when they communicate and interact with others because they have the feeling of belonging to a certain group of people, and they have a higher level of confidence [58]. The feeling of connectedness in a workplace becomes especially important due to the more frequent use of social media that employees use in their private lives – outside the workplace. It therefore becomes especially important to fulfill the need for socialization at the workplace via similar platforms [59]. Hence, interpersonal relatedness in digital work environment has been shown to have a significant influence on employees' well-being.

Hence, it is proposed:

H2b. Relatedness positively influences well-being expectations in the digital workplace.

Definitely, connectedness and collaboration are often pointed out as the advantages of digital working environment. Namely, technological solutions make information available, and make collaboration and document sharing easier [55].

According to existing literature, employee performance and well-being represent main drivers for workplace transformation [25–28]. More specifically, if employees have expectations that digital environment will enable them to accomplish better performance, bigger satisfaction and personal well-being more easily, they will be more motivated and willing to support digital transformation. They will feel comfort in using digital technology thus lowering the resistance to accept future workplace [60]. Therefore, it is posited that:

H3. Performance expectations positively influence employees' intentions to actively support digital workplace transformation.

H4. Well-being expectations positively influence employees' intentions to actively support the digital workplace transformation.

4. Methodology

The sample of the research consisted of 79 financial institutions, banks and insurance companies in B&H. The questionnaire was sent out to the managers of those financial institutions via e-mail, and they were asked to distribute the survey to all employees. In order to assure that the questions were relevant for the research, their content, meaning and length were carefully analyzed.

The survey was conducted through a mailing list-based sampling structure. Due to the fact that there are not many financial institutions in B&H, the corresponding contacts were collected manually. Accordingly, random sampling was used, and only e-mail addresses from the sample units were required. The survey with close-ended questions was sent on September 2nd, 2020, and data were collected in the period from September until November 2020.

Complete anonymity was assured to all participants and their participation in the survey was optional. The survey was prefaced with a summary of the research and a definition of the term digital workplace transformation. Furthermore, the survey consisted of six main parts with separate questions that reflected the research variables. Besides the questions regarding the analyzed variables, the survey consisted of also some demographic questions in regard to gender, age, years of experience, and organization type.

The questions measuring autonomy and relatedness were made following [61,62]. Autonomy was defined as the extent to which an individual is capable to employ all digitally transformed tools at the workplace in a self-determined way. Three indicators were used to measure this variable, as for instance "I would like to be able to/I can decide for myself to what extent I will use digital technologies in the workplace". On the other side, relatedness was defined as the extent to which a digitally transformed workplace is likely to generate an impression of connectedness among employees within an organization. Three indicators were used to measure relatedness, as for instance "People in a digital work environment are peer-friendly".

Performance was measured by using questions recommended by Ref. [63]. This variable was defined as the extent to which an employee anticipates a digital workplace would contribute to their productivity. Four indicators were used to measure performance, as for instance "I would find s digitally transformed workplace useful in my job". Questions related to well-being were adopted from Ref. [64]. The definition of well-being encompasses the extent to which an employee considers engaging within a digital workplace as being enjoyable. Four indicators were used to measure well-being, as for instance "I would have fun using the digitally transformed workplace".

Finally, the intention to actively support digital workplace transformation was measured following [63]. This outcome variable encompasses the support of reciprocal change through, for example, the individual's feedback. Five indicators were used to measure the intention, as for instance "I intend to actively participate in the process of change towards a digitally transformed workplace.".

The survey used a five-level Likert scale in the range from 1 (absolutely do not agree) to 5 (absolutely agree). Confirmatory factor analysis (CFA) and the method of structural equation modeling (SEM) were used for the analysis of quantitative data using the SPSS 22 and Lisrel 8.8 and following the six steps recommended by Ref. [65].

Overall, 161 responses were collected. The structure of the sample is presented in Table 1. When it comes to the demographics of the survey participants, there were 35% male and 65% female respondents. Also, more than 60% of the participants were older than 40. The majority of participants had a bachelor and master's degree, 31.7% and 43.5%, respectively. Additionally, most of the respondents, 47%, have been with the institution for between one and six years, 43% have been working for more than six years, and the rest has just recently joined.

5. Data analysis and results

In order to analyze the collected data, first, a preliminary analysis of the data was conducted in order to verify if there were any existing outliers, missing data and to test the data for assumptions of the multivariate statistical analysis. Furthermore, following [65], the confirmatory factor analysis will be undertaken in order to prove the reliability, discriminant validity and the convergence of the measurement models. Finally, the structural model and the hypotheses will be tested with the method of structural equation modeling.

5.1. Data examination

The initial step of the data examination was the missing value analysis (MVA) which had the purpose to identify the sample according to which the collected data values were missing. The analysis was performed, and it was determined that there was no missing data and all observations were retained. Furthermore, the data was tested for outliers. In that regard, following [65], the Mahalanobis D^2 method was used, by which the distance of each observation of multidimensional space in relation to the center of the mean values of all observations was measured. The threshold was 3.50 [65] and the multivariate analysis did not show the existence of any outliers, so that all observations could be retained for further analysis.

The data were also tested on assumptions of multivariate techniques, for normality, homoskedasticity, and linearity. The data collected through this research were not completely normally distributed. Nevertheless, it is considered that when it comes to larger samples ($n > 50$), variables with symmetry and roundness that deviate from the normal distribution do not change the essential results of the research [66]. Furthermore, the analysis will use the maximum likelihood method, which is significantly robust to data deviations from the normality assumption in multivariate techniques, such as the factor analysis and modeling of structural equations [67,68]. Moreover, since the technique of the SEM method is considered to be of high reliability,

Table 1
Sample structure.

Organization	Number	Percentage (%)
Insurance company	81	50.3
Bank	66	41.0
Microcredit organization	8	5.0
Leasing	4	2.5
Financial agency	2	1.2
Total	**161**	**100**

and as the sample contains 161 observations, it is possible to ignore the problem of data that do not have a completely normal distribution, and use them without transformation.

The second assumption of homoskedasticity was tested using the Breusch-Pagan test whose null hypothesis states that the homoskedasticity of data exists. The test showed that the null hypothesis cannot be rejected ($p = 0.076$). Thus, the obtained results confirm the existence of homoskedastic data. Finally, collinearity was tested by calculating the variance inflation factor (VIF) for all predictor latent variables. The resulting values were compared with the threshold of 5 [65] and it was concluded that there is no significant multicollinearity of data.

5.2. Measurement model analysis

The quantitative data analysis was conducted according to the recommendations of [65]. The CFA was used with the aim to test the eligibility of the measurement model. For some variables, the primarily tested model, with all indicators, showed an insufficient fit. Accordingly, some variables (PE3, WB3 and SU1), were excluded from the model and the CFA was repeated. The Confirmatory factor analysis in the second iteration showed a good fit for the model.

After the eligibility of the model was proofed, the reliability and validity of the model was verified. The testing of the model reliability was measured by the factor of composite Reliability (CR), which has to be above 0.6. The recommendation of [65] was followed in this paper, and it says that the CR values above 0.7 are the ones which properly measure reliability. It may be seen in Table 1 that all values of CR are above 0.7, so that the reliability of the model is confirmed.

Furthermore, when it comes to the validity of the measurement model, the convergent and discriminant validity were verified. According to Ref. [65], the convergent validity was proofed through the factor loadings and the average variance extracted (AVE) in which an appropriate convergence is achieved if these two values are above 0.5. Also, discriminant validity was tested through the comparison of the square root of AVE (which had to be higher) to the correlations of all variables.

The assumptions of convergent validity are satisfied by the measurement model as the factor loadings were larger than 0.5 and also, as Table 2 shows, the values of AVE are above 0.5. Moreover, the discriminant validity is also confirmed, as the square root of AVE values (on the diagonal in Table 2) are greater than correlations with other constructs presented below and to their left (see Fig. 1).

5.3. Structural model testing

After the measurement model was tested and confirmed a proper fit, the structural model and the hypotheses were tested using SEM with the maximum likelihood estimation. It may be noticed in Fig. 2 that the SEM model is presented with the connections and results of calculations between variables.

All the indicators of the goodness of fit confirm a good fit of this model, including the normed $\chi 2/df$ of 3.666, and the RMSEA with a marginal fit of 0.129. Accordingly, the results of hypotheses testing are presented in Table 3.

Based on the data analysis results from Table 3, four hypotheses are supported. Relatedness significantly influences performance ($\beta = 0.803$; $t = 8.731$; $p < 0.01$) and well-being ($\beta = 0.941$; $t = 10.858$; $p < 0.01$). In other words, through the enhancement of relatedness at a digital workplace, the performance and well-being of the employees at the workplace will increase.

Moreover, performance significantly increases intention ($\beta = 0.247$; $t = 2.629$; $p < 0.01$). This means that a better performance at a digital workplace, will significantly increase the intention of the employees to actively support digital workplace transformation. Finally, the analysis showed that well-being significantly influenced intention ($\beta = 0.555$; $t = 5.772$; $p < 0.01$). This means that employees' well-being at a digital workplace will increase their intention to actively support digital workplace transformation.

The control variables in the research were education and job experience. The results in Table 4 show that they significantly influence intention. More precisely, an employee with a higher level of education and with more job experience will have a stronger intention to actively support digital workplace transformation.

Table 2
Reliability and validity testing.

	CR	AVE	AU	RE	PE	WB	SU
AU	0.862	0.686	**0.828**				
RE	0.882	0.716	0.228	**0.846**			
PE	0.913	0.779	0.102	0.706	**0.883**		
WB	0.931	0.817	0.186	0.786	0.863	**0.904**	
SU	0.912	0.777	0.111	0.655	0.697	0.759	**0.881**

6. Discussion

The research results revealed that employees' connectedness with others positively influenced their performance and well-being expectations in a digital workplace. This implies that employees who feel connected in the workplace will achieve higher work performance but also a higher level of enjoyment.

These findings are consistent with previous studies which demonstrated the positive relationship between satisfaction of psychological needs and work performance and well-being in a digital workplace [14,51,54].

Consequently, interpersonal relatedness, as a psychological need, has been shown to have a significant influence on employees' performance and well-being in a digital working environment. Increased technology usage leads to increased relational expectations of digital workforce [10]. So, employees "can engage with each other, with stakeholders and customers, with information and knowledge, and with ideas" [16]. They can collaborate with colleagues across the globe and thus achieve higher productivity, creativity, performances and well-being benefits [69]. On the other hand, their interpersonal relatedness gives them a sense of belonging to a group which shares the same values and contributes to greater self-confidence and enjoyment.

Moreover, our findings confirm that those employees who have positive performance and well-being expectations are more willing to support workplace digital transformation. This argument is in line with the previous literature which suggests that performance and well-being represent main drivers for workplace transformation [25–28]. Thus [10], indicates that employees in their interactions with technology have developed many competencies such as digital fluency which allow them to achieve desired outcomes, manipulate data, creatively represent information, solve problems and design new ways of working. Similarly [70,71], in their studies confirm that digital workforce can achieve higher work and learning performances due to the use of technology, their competencies and leadership skills. Also, according to recent studies, positive well-being expectations have been shown significant for employees' intentions to support digital workplace transformation considering the findings that digital workplace leads to an increased staff satisfaction and employee experience but also to a reduced stress level [33,36]. Therefore, we conclude that employees with positive perceptions of performance and well-being in digital working environment will have lower resistance to accept future workplace.

On the other hand, we found that employees' autonomy did not significantly contribute to the level of performance and well-being expectations in a digital workplace. We believe these findings could be discussed in the context of the specific sector and explained by the fact that financial institutions such as banks and insurance companies are characterized by stable and strict structures and ways of functioning.

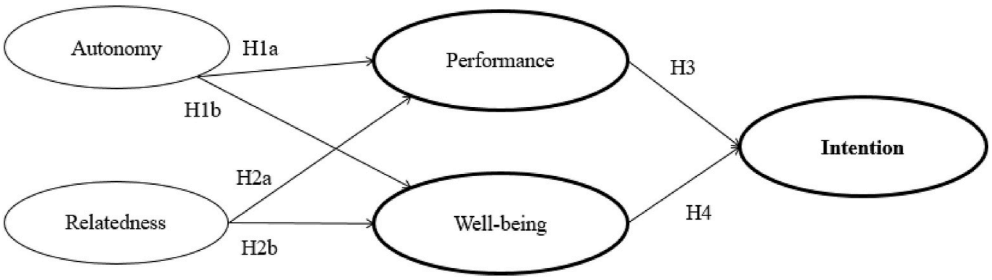

Fig. 1. Conceptual model. Source: Author's work.

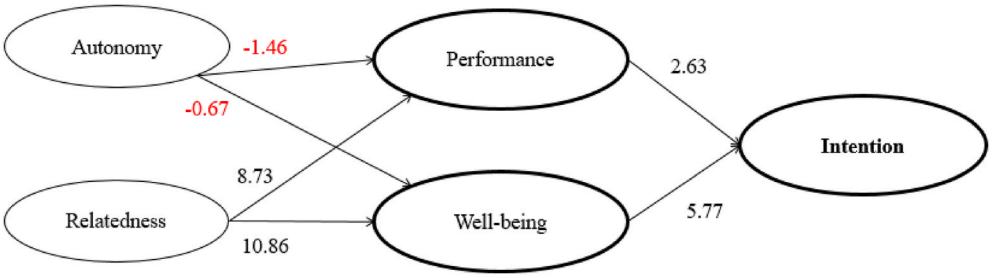

Fig. 2. SEM model. Source: Author's work.

Table 3
Hypotheses testing.

	Dependent variable	Independent variable	Non-standardized rating parameter	Standardized rating parameter	t-value	Hypotheses
H1a	Performance	← Autonomy	−0.0619	−0.088	−1.458	Not significant
H1b	Well-being	← Autonomy	−0.034	−0.030	−0.671	Not significant
H2a	Performance	← Relatedness	1.179	0.803	8.731***	Significant
H2b	Well-being	← Relatedness	2.159	0.941	10.858***	Significant
H3	Intention	← Performance	0.172	0.247	2.629***	Significant
H4	Intention	← Well-being	0.247	0.555	5.772***	Significant

***p < 0.01; **p < 0.05; *p < 0.1.

Table 4
Control variables testing.

	Dependent variable	Independent variable	Non-standardized rating parameter	Standardized rating parameter	t-value	Hypotheses
H1a	Performance	← Autonomy	−0.0618	−0.088	−1.461	Not significant
H1b	Well-being	← Autonomy	−0.0348	−0.032	−0.701	Not significant
H2a	Performance	← Relatedness	1.180	0.806	8.745***	Significant
H2b	Well-being	← Relatedness	2.155	0.942	10.844***	Significant
H3	Intention	← Performance	0.186	0.268	3.018***	Significant
H4	Intention	← Well-being	0.257	0.580	6.304***	Significant
	Intention	← education	0.136	0.116	2.194**	Significant
	Intention	← experience	0.295	0.235	4.344***	Significant

***p < 0.01; **p < 0.05; *p < 0.1.

More precisely, most procedures are highly standardized with precisely defined tasks and activities such as loan application and approval, selling insurance policy, etc. This is in line with the study carried out by Ref. [72] which confirms that employees in this sector "have specific duties and they have learnt to work in a certain way so their workplace does not offer them many opportunities to participate in decision--making". Moreover, employees' autonomy can be also affected by the level of their intrinsic motivation or other personal traits. Thus, less self-driven employees who lack purpose and meaning in their jobs may need higher levels of structure or assistance from their supervisors in order to perform well [73,74]. Also, considering a recent growth of homeworking due to COVID-19 pandemic, it would be interesting to investigate the relationship between remote working arrangements and employees' psychological needs, particularly social connectedness. Namely, it was found that remote work, at the individual level, includes individualization in which work performance, responsibilities and social integration have been removed to individuals [75,76].

Therefore, the relationship between employees' autonomy and their performance and well-being expectations seems to be more complex and can be moderated by different factors including dimensions of self-determination theory. Accordingly, future studies should investigate the moderating role of those dimensions in terms of the relationship between employees' autonomy and their work performance and work-related well-being.

Finally, it is also important to discuss our research findings and research method against the backdrop of struggling transition economies. Being mindful of the local context and culture was found to be very important not only when interpreting collected data, but also for

context- and culturally-sensitive research design.

7. Conclusion and recommendations

This research confirms that digital transformation of workplace goes beyond digital technology. Positive expectations of employees regarding performance and well-being in future workplace which mostly depends on the relatedness with others, influence their motivation and intentions to support transformation processes. This study also significantly contributes to the research stream that refers to the pre-digital organizations transformation. Namely, precisely in these organizations, the focus is mostly on the technology and provision of adequate digital infrastructure and on strengthening of digital skills of employees while their expectations, behavioral intentions and psychological needs are neglected. This study finds that precisely these needs and intentions represent critical points in lowering the resistance to accept digital environment, as well as successful transformations.

From the empirical evidences discussed above, we can derive relevant managerial implications. This research has an important implication to managers in designing job. In order to enhance the performance and wellness of its employees, an organization should support their basic psychological needs. Moreover, apart from instigating digital skills and fluency, managers should encourage employee engagement, collaboration and connectedness among employees in fulfilling their tasks. Interpersonal relatedness can contribute significantly to a bigger employee satisfaction. On the other hand, this kind of leadership style and work culture brings along numerous advantages for the organization as well, and those are primarily productivity and revenue growth.

The paper is not without limitations. Firstly, the study focuses only on employees' autonomy, interpersonal relatedness, expectations regarding their work-related performance and well-being as independent variables. Our research model doesn't include competence as a psychological need, digital skills or any other factors that may affect employees' intentions to use digital workplace.

Also, the data used in this study are based on financial sector in Bosnia and Herzegovina and results are specific to this sector and this country. Taking into consideration bank-centric financial market model in B&H and market dynamics and evolution in terms of the innovative and more complex product introduction particularly in banks and insurance companies, we believe hypothesized and demonstrated relationships could be defined differently. So, generalizations should be made only with caution. We encourage scholars to conduct a validation of our study within other sectors and research contexts.

Hence, further research needs to extend our findings by including further factors such as employees' digital skills and their personal traits (e.g. personal innovativeness) as significant factors of employees' support towards digital workplace transformation. More research is needed that focuses on human motivation of employees, their psychological needs and different aspects of self-determination in the context of digital workplace transformation. Future studies should explore workplace tasks, leadership style and work culture in relation to employees' motivation and work outcomes.

Considering that this study was conducted in an extraordinary context and COVID-19 outbreak, when remote working was no longer optional, we believe our findings will be useful in further research on remote work practices. Specifically, future studies should consider effects of COVID-19 and post-COVID environment on employee psychological needs and intentions in a digital workplace. We encourage scholars to investigate whether those characteristics are shaped differently due to the pandemic context.

Author statement

Jasmina Selimović: Data curation, Writing- Original draft preparation, Supervision, Validation; **Amila Pilav-Velić**: Conceptualization, Investigation, Writing- Reviewing and Editing, Validation; **Lamija Krndžija**: Methodology, Software, Validation; Visualization.

References

[1] A. Richter, P. Heinrich, A. Stocker, G. Schwabe, Digital work design, Bus. Inform. Syst. Eng. 60 (3) (2018) 259–264.
[2] A.J. Martin, The role of positive psychology in enhancing satisfaction, motivation, and productivity in the workplace, J. Organ. Behav. Manag. 24 (1–2) (2005) 113–133.
[3] A. Margaryan, A. Littlejohn, G. Vojt, Are digital natives a myth or reality? University students' use of digital technologies, Comput. Educ. 56 (2) (2011) 429–440.
[4] D. Derks, A.B. Bakker, P. Peters, P. van Wingerden, Work-related smartphone use, work–family conflict and family role performance: the role of segmentation preference, Hum. Relat. 69 (5) (2016) 1045–1068.
[5] E. Brynjolfsson, A. McAfee, The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies, WW Norton & Company, 2014.
[6] J. Vom Brocke, W. Maaß, P. Buxmann, A. Maedche, J.M. Leimeister, G. Pecht, Future work and enterprise systems, Bus. Inform. Syst. Eng. 60 (4) (2018) 357–366.
[7] S. Dittes, S. Richter, A. Richter, S. Smolnik, Toward the workplace of the future: how organizations can facilitate digital work, Bus. Horiz. 62 (5) (2019) 649–661.
[8] C.E. Bouée, Digital transformation doesn't have to leave employees behind, Harv. Bus. Rev. 2015 (2015) 1–5.
[9] V. Venkatesh, M.G. Morris, G.B. Davis, F.D. Davis, User acceptance of information technology: toward a unified view, MIS Q. (2003) 425–478.
[10] A. Colbert, N. Yee, G. George, The Digital Workforce and the Workplace of the Future, 2016.
[11] T. Schwarzmüller, P. Brosi, D. Duman, I.M. Welpe, How does the digital transformation affect organizations? Key themes of change in work design and leadership, Mrev Manag. Rev. 29 (2) (2018) 114–138.
[12] F. Svahn, L. Mathiassen, R. Lindgren, Embracing digital innovation in incumbent firms: how volvo cars managed competing concerns, MIS Quat. 41 (1) (2017) 239–253.
[13] E.L. Deci, A.H. Olafsen, R.M. Ryan, Self-determination theory in work organizations: the state of a science, Ann. Rev. Org. Psychol. Org. Behav. 4 (2017) 19–43.
[14] C. Meske, I. Junglas, Investigating the elicitation of employees' support towards digital workplace transformation, Behav. Inf. Technol. (2020) 1–7.
[15] M.L. Kaarst-Brown, J. Quesenberry, F. Niederman, T. Weitzel, Editors' comments: special issue editorial: new approaches to optimizing the digital workplace, MIS Q. Exec. 17 (4) (2018) ix–xxiii.
[16] K. Dery, I.M. Sebastian, N. van der Meulen, The digital workplace is key to digital innovation, MIS Q. Exec. 16 (2) (2017).
[17] S. Köffer, Designing the digital workplace of the future–what scholars recommend to practitioners, Icis 1–21 (2015).
[18] S. Chanias, M.D. Myers, T. Hess, Digital transformation strategy making in pre-digital organizations: the case of a financial services provider, J. Strat. Inf. Syst. 28 (1) (2019) 17–33.
[19] J.W. Ross, I. Sebastian, C. Beath, M. Mocker, K. Moloney, N. Fonstad, Designing and executing digital strategies, in: Thirty Seventh International Conference on Information Systems. Dublin, Ireland, 2016.
[20] I.M. Sebastian, J.W. Ross, C. Beath, M. Mocker, K.G. Moloney, N.O. Fonstad, How big old companies navigate digital transformation, MIS Q. Exec. 16 (3) (2017) 197–213.
[21] M.P. Zimmer, A. Baiyere, H. Salmela, Digital workplace transformation: the importance of deinstitutionalising the taken for granted, InECIS (2020).
[22] A.P. Singh, J. Dangmei, Understanding the generation Z: the future workforce, South-Asian J. Multidiscipl. Stud. 3 (3) (2016) 1–5.
[23] M. Mazmanian, W.J. Orlikowski, J. Yates, The autonomy paradox: the implications of mobile email devices for knowledge professionals, Organ. Sci. 24 (5) (2013) 1337–1357.
[24] T. Kissmer, J. Knoll, S. Stieglitz, R. GroÃŸ, Knowledge Workers' Expectations towards a Digital Workplace, 2018.
[25] W. Wang, M. Daneshvar Kakhki, V. Uppala, The Interaction Effect of Technostress and Non-technological Stress on Employees' Performance, 2017, pp. 1–5.
[26] M. Tarafdar, C. Maier, S. Laumer, T. Weitzel, Explaining the link between technostress and technology addiction for social networking sites: a study of distraction as a coping behavior, Inf. Syst. J. 30 (1) (2020) 96–124.
[27] C. Maier, S. Laumer, J. Wirth, T. Weitzel, Technostress and the hierarchical levels of personality: a two-wave study with multiple data samples, Eur. J. Inf. Syst. 28 (5) (2019) 496–522.
[28] M. Tarafdar, J. DArcy, O. Turel, A. Gupta, The dark side of information technology, MIT Sloan Manag. Rev. 56 (2) (2015) 61.
[29] T.S. Ragu-Nathan, M. Tarafdar, B.S. Ragu-Nathan, Q. Tu, The consequences of technostress for end users in organizations: Conceptual development and empirical validation, Inf. Syst. Res. 19 (4) (2008) 417–433.
[30] R. Ayyagari, V. Grover, R. Purvis, Technostress: technological antecedents and implications, MIS Q. (2011) 831–858.
[31] P.T. Nguyen, A. Yandi, M.R. Mahaputra, Factors that influence employee performance: motivation, leadership, environment, culture organization, work achievement, competence and compensation (A study of human resource management literature studies), Dinasti Int. J. Digital Bus. Manag. 1 (4) (2020) 645–662.

[32] M.P. Zimmer, M. Niemimaa, Navigating in the digital jungle: articulating combinatory affordances of digital infrastructures for collaboration. In Pacific asia conference on information systems, Assoc. Inform. Syst. 1–14 (2019).
[33] M. Attaran, S. Attaran, D. Kirkland, The need for digital workplace: increasing workforce productivity in the information age, Int. J. Enterprise Inf. Syst. 15 (1) (2019) 1–23.
[34] M.P. Miller, M.E. Marsh, The Digital Renaissance of Work: Delivering Digital Workplaces Fit for the Future, Gower Publishing, Ltd., 2014.
[35] Deloitte, The Digital Workplace: Think, Share, Do Transform Your Employee Experience, Deloitte, 2014.
[36] P. Miller, The Digital Workplace: How Technology Is Liberating Work, Dog Ear Publishing, 2012.
[37] S. Schillerwein, The digital workplace, redefining productivity in the information age, Infocentric Res. AG (2011).
[38] J. Gantz, A. Boyd, S. Dowling, Tackling information overload at the source, IDC White Pap. (2009).
[39] E.L. Deci, R.M. Ryan, Intrinsic Motivation and Self-Determination in Human Behaviour, Plenum, New York, 1985, 1985.
[40] R.S. Gajendran, D.A. Harrison, K. Delaney-Klinger, Are telecommuters remotely good citizens? Unpacking telecommuting's effects on performance via I-deals and job resources, Person. Psychol. 68 (2) (2015) 353–393.
[41] C.L. Ter Hoeven, W. Van Zoonen, Flexible work designs and employee well-being: examining the effects of resources and demands, New Technol. Work. Employ. 30 (3) (2015) 237–255.
[42] F. Bélanger, M.B. Watson-Manheim, B.R. Swan, A multi-level socio-technical systems telecommuting framework, Behav. Inf. Technol. 32 (12) (2013) 1257–1279.
[43] B. Wang, Y. Liu, J. Qian, S.K. Parker, Achieving effective remote working during the COVID-19 pandemic: a work design perspective, Appl. Psychol. 70 (1) (2021) 16–59.
[44] O. Werth, C. Schwarzbach, D.R. Cardona, M.H. Breitner, J.M.G. von der Schulenburg, Influencing factors for the digital transformation in the financial services sector, Z. Gesamte Versicherungswissenschaft (2020) 1–25.
[45] P. Gomber, R.J. Kauffman, C. Parker, B.W. Weber, On the fintech revolution: interpreting the forces of innovation, disruption, and transformation in financial services, J. Manag. Inf. Syst. 35 (1) (2018) 220–265.
[46] A. Johnson, M. Groth, S. Dey, H. Nguyen, S. Joyce, L. Tan, S.B. Harvey, A review and agenda for examining how technology-driven changes at work will impact workplace mental health and employee well-being, Aust. J. Manag. 45 (3) (2020) 402–424.
[47] C. Fernet, S. Austin, S.G. Trépanier, M. Dussault, How do job characteristics contribute to burnout? Exploring the distinct mediating roles of perceived autonomy, competence, and relatedness, Eur. J. Work. Organ. Psychol. 22 (2) (2013) 123–137.
[48] A.H. Hon, Shaping environments conductive to creativity: the role of intrinsic motivation, Cornell Hospital. Quart. 53 (1) (2012) 53–64.
[49] J.L. Duda, G.C. Williams, N. Ntoumanis, A. Daley, F.F. Eves, N. Mutrie, P.C. Rouse, R. Lodhia, R.V. Blamey, K. Jolly, Effects of a standard provision versus an autonomy supportive exercise referral programme on physical activity, quality of life and well-being indicators: a cluster randomised controlled trial, Int. J. Behav. Nutr. Phys. Activ. 11 (1) (2014) 1–5.
[50] A. Khedhaouria, N. Belbaly, H. Benbya, Exploring the impact of organizational climate factors on organizational creativity within a centralized IS, Syst. Inf. Manag. 19 (4) (2014) 7–30.
[51] C.S. Andreassen, J. Hetland, S. Pallesen, The relationship between 'workaholism', basic needs satisfaction at work and personality, Eur. J. Pers.: Publ. Eur. Assoc. Personal. Psychol. 24 (1) (2010) 3–17.
[52] N. Gillet, E. Fouquereau, J. Forest, P. Brunault, P. Colombat, The impact of organizational factors on psychological needs and their relations with well-being, J. Bus. Psychol. 27 (4) (2012) 437–450.
[53] T. Vander Elst, A. Van den Broeck, H. De Witte, N. De Cuyper, The mediating role of frustration of psychological needs in the relationship between job insecurity and work-related well-being, Work. Stress 26 (3) (2012) 252–271.
[54] S. Kim, R.P. Chen, K. Zhang, Anthropomorphized helpers undermine autonomy and enjoyment in computer games, J. Consum. Res. 43 (2) (2016) 282–302.
[55] L.L. Gilson, M.T. Maynard, N.C. Jones Young, M. Vartiainen, M. Hakonen, Virtual teams research: 10 years, 10 themes, and 10 opportunities, J. Manag. 41 (5) (2015) 1313–1337.
[56] M. Karoui, A. Dudezert, D.E. Leidner, Strategies and symbolism in the adoption of organizational social networking systems, J. Strat. Inf. Syst. 24 (1) (2015) 15–32.
[57] Igloo Software, Ro-Why: the Business Value of a Digital Workplace, 2017. https://www-cmswire.simplermedia.com/rs/706-YIA-261/images/RO_Why.pdf.
[58] E. Bucher, C. Fieseler, A. Suphan, The stress potential of social media in the workplace, Inf. Commun. Soc. 16 (10) (2013) 1639–1667.
[59] A.G. Munene, Y.M. Nyaribo, Effect of social media pertication in the workplace on employee productivity, Int. J. Adv. Manag. Econ. 2 (2) (2013) 141–150.
[60] C. Briggs, K. MaKiCe, Digital Fluency. Building Success in the Digital Age, 2012.
[61] E.L. Deci, R.M. Ryan, M. Gagné, D.R. Leone, J. Usunov, B.P. Kornazheva, Need satisfaction, motivation, and well-being in the work organizations of a former eastern bloc country: a cross-cultural study of self-determination, Pers. Soc. Psychol. Bull. 27 (8) (2001) 930–942.
[62] G.M. Spreitzer, Psychological empowerment in the workplace: dimensions, measurement, and validation, Acad. Manag. J. 38 (5) (1995) 1442–1465.
[63] V. Venkatesh, M.G. Morris, G.B. Davis, F.D. Davis, User acceptance of information technology: toward a unified view, MIS Q. (2003) 425–478.
[64] R. Agarwal, E. Karahanna, Time flies when you're having fun: cognitive absorption and beliefs about information technology usage, MIS Q. (2000) 665–694.
[65] J.F. Hair, W.C. Black, B.J. Babin, R.E. Anderson, Multivariate Data Analysis, Pearson Prentice Hall, New Jersey, 2010.
[66] B.G. Tabachnik, L.S. Fidell, Using Multivariate Statistics (6. Baski), Pearson, US, 2012.
[67] J. Chioma, I. Sidney, I. Onyedikachi, Robustness of the maximum likelihood estimation procedure in factor analysis, Afr. J. Math. Comput. Sci. Res. 2 (5) (2009), 081-087.
[68] E.L. Fuller, W.J. Hemmerle, Robustness of the maximum-likelihood estimation procedure in factor analysis, Psychometrika 31 (2) (1966) 255–266.
[69] P.R. Oeij, S. Dhondt, D. Rus, G. Van Hootegem, The digital transformation requires workplace innovation: an introduction, Int. J. Technol. Transf. Commer. 16 (3) (2019) 199–207.
[70] N. Yee, The Proteus Paradox: How Online Games and Virtual Worlds Change Us-And How They Don't, Yale University Press, 2014.
[71] S. Hsi, Conceptualizing learning from the everyday activities of digital kids, Int. J. Sci. Educ. 29 (12) (2007) 1509–1529.
[72] D. Belias, A. Koustelios, G. Vairaktarakis, L. Sdrolias, Organizational culture and job satisfaction of Greek banking institutions, Procedia Soc. Behav. Sci. 175 (2015) 314–323.
[73] A. Dysvik, B. Kuvaas, Intrinsic motivation as a moderator on the relationship between perceived job autonomy and work performance, Eur. J. Work. Organ. Psychol. 20 (3) (2011) 367–387.
[74] B. Kuvaas, Performance appraisal satisfaction and employee outcomes: mediating and moderating roles of work motivation, Int. J. Hum. Resour. Manag. 17 (3) (2006) 504–522.
[75] S.T. Soroui, Understanding the drivers and implications of remote work from the local perspective: an exploratory study into the dis/reembedding dynamics, Technol. Soc. (2020), https://doi.org/10.1016/j.techsoc.2020.101328.
[76] L. Taskin, V. Devos, Paradoxes from the individualization of human resource management: the case of telework, J. Bus. Ethics 62 (1) (2005) 13–24, https://doi.org/10.1007/s10551-005-8710-0.